



# CONGRESSIONAL BUDGET OFFICE COST ESTIMATE

July 28, 2011

## **S. 512** **Nuclear Power 2021 Act**

*As ordered reported by the Senate Committee on Energy and Natural Resources  
on July 14, 2011*

### **SUMMARY**

S. 512 would authorize the Department of Energy (DOE) to enter into cooperative agreements with private-sector entities to develop and license standard designs for small modular nuclear reactors. CBO estimates that implementing S. 512 would cost \$414 million over the 2012-2016 period, assuming appropriation of the necessary amounts. Enacting S. 512 would not affect direct spending or revenues; therefore, pay-as-you-go procedures do not apply.

S. 512 contains no intergovernmental or private-sector mandates as defined in the Unfunded Mandates Reform Act (UMRA).

### **ESTIMATED COST TO THE FEDERAL GOVERNMENT**

The estimated budgetary impact of S. 512 is shown in the following table. The costs of this legislation fall within budget function 270 (energy).

	By Fiscal Year, in Millions of Dollars					2012- 2016
	2012	2013	2014	2015	2016	
<b>CHANGES IN SPENDING SUBJECT TO APPROPRIATION</b>						
Estimated Authorization Level	67	100	100	100	100	467
Estimated Outlays	40	79	95	100	100	414

## **BASIS OF ESTIMATE**

S. 512 would direct the Secretary of Energy to enter into cooperative agreements with private-sector entities to develop standard designs for small modular nuclear reactors as well as processes for licensing such reactors with the Nuclear Regulatory Commission (NRC). The bill would authorize DOE to cover up to 50 percent of the cost of developing designs for such reactors and up to 25 percent of the cost to demonstrate licensing processes and would specify a final deadline for all work to be completed by January 1, 2021.

CBO estimates that fully funding S. 512 would require appropriations totaling \$467 million over the 2012-2016 period. That estimate is based on information from DOE about the agency's costs to develop facilities and demonstrate licensing processes for new, large-scale nuclear reactors and takes into account the cost-share requirements specified in the bill. Assuming appropriation of those amounts, CBO estimates that resulting outlays would total \$414 million over the 2012-2016 period.

The NRC also would incur costs to certify designs and develop licensing procedures for small reactors under S. 512. However, according to the NRC, the agency already plans to develop its capacity to support regulatory processes for small modular nuclear reactors. As a result, CBO estimates that implementing S. 512 would not significantly affect net spending by that agency; any such spending would be subject to appropriation and would be largely offset by fees that the NRC is authorized to collect from regulated entities.

**PAY-AS-YOU-GO CONSIDERATIONS:** None.

## **INTERGOVERNMENTAL AND PRIVATE-SECTOR IMPACT**

S. 512 contains no intergovernmental or private-sector mandates as defined in UMRA and would impose no costs on state, local, or tribal governments.

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